

**Mitigation Monitoring and Reporting Program**  
**State Coastal Conservancy**  
**Restoration of the Northern Dune Additions to Humboldt Bay**  
**National Wildlife Refuge**  
**State Clearinghouse #2020069006**

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**Project Description:** The U.S. Fish and Wildlife Service (USFWS) proposes to restore 300 acres of coastal dunes on the north spit of Humboldt Bay through the removal of European beach grass, yellow bush lupine, and invasive annual grasses followed by revegetation with native species. The work will involve any of, or a combination of, the following methodologies. The Service will use a variety of Integrated Pest Management methods to restore coastal dunes. On the foredune, USFWS will primarily use a combination of prescribed burning followed by manual application of herbicide on resprouts, and follow up manual treatments and/or spot spraying. The foredune would then be planted with a variety of native dune-building and mound-building forbs and grasses collected nearby or grown from local seeds and planted as out-plantings. In the backdune, a variety of methods will be used as dictated by topography and existing vegetation, including heavy equipment to scrape and bury the invasive non-native vegetation and litter layer, manual removal of scrub vegetation and iceplant, flaming of annual grasses, and spot-spraying of grasses and iceplant. In a portion of the backdune, the yellow bush lupine would be removed and native forest species would be planted in order to accelerate succession and restore native beach pine forest. The backdune will primarily be planted with a mixture of native forbs and grasses.

The restoration of coastal dunes is needed to conserve and restore globally rare dune and dune forest habitats, associated native plant and animal species, and to support recovery of threatened, endangered, and endemic species that depend on these rare habitats. The proposed project would extend dune restoration completed at the Lanphere and Ma-le'i Dunes Units of the Humboldt Bay National Wildlife Refuge onto the Wadulh Unit of the Wildlife Refuge of the north spit of Humboldt Bay.

The USFWS completed an Environmental Assessment (EA) for the project and adopted a Finding of No Significant Impact (FONSI) pursuant to the National Environmental Policy Act. The Coastal Conservancy is using the project FONSI in lieu of preparing a separate Negative Declaration under the California Environmental

Quality Act. The following best management practices/avoidance measures included in the FONSI shall be monitored and reported as required.

| <b>Impact</b>               | <b>Mitigation Measure</b>  | <b>Implementation Responsibility</b> | <b>Monitoring/ Reporting Responsibility</b> | <b>Timing</b>                      |
|-----------------------------|--|--------------------------------------|---|------------------------------------|
| <b>Air Quality</b>          | Burning invasive vegetation piles would be done only with a burn plan that is approved by the North Valley Air Pollution Management District.  | Project Developer                    | USFWS                                       | Prior to implementation            |
| <b>Biological Resources</b> | All individuals of the endangered Humboldt Bay wallflower found adjacent to the work area (impact area) or in transition areas would be flagged and avoided, and barriers would be erected if sand movement could potentially affect any plants.                 | Project Developer                    | USFWS                                       | At time of / during implementation |
| <b>Biological Resources</b> | Buffer areas of 3-6 ft. will be established around existing wetlands and riparian areas to avoid impacts from heavy equipment use. No heavy equipment will be used and only manual vegetation removal will occur in buffer areas.                                | Project Developer                    | USFWS                                       | Prior to and during construction   |
| <b>Cultural Resources</b>   | If any cultural materials, sites, or properties should be discovered, a qualified archaeologist will evaluate the finds and appropriate protection measures consistent with the requirements of 14 California Code of Regulations § 15064.5(f) will be taken, if | Project Developer                    | USFWS                                       | During implementation              |

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|  | necessary. In the event that any human remains are encountered or in the event that unassociated funerary objects or grave goods are discovered, work in the immediate vicinity of the discovery, other than non-disturbing documentation, will cease and USFWS will comply with applicable state laws (14 California Code of Regulations § 15064.5(e), Health & Safety Code § 75050.5, and Public Resources Code § 5097.98), and federal laws (the Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act). |                   |       |                         |
| <b>Geology and Soils</b>               | The areas where Ammophila is removed will be immediately replanted to minimize dune elevation loss.  | Project Developer | USFWS | During implementation   |
| <b>Hazards and Hazardous Materials</b> | Before pesticides can be used to eradicate or control invasive plant species on USFWS owned land, a pesticide use proposal would be prepared and approved in accordance with Policy 569 FW1.   | Project Developer | USFWS | Prior to implementation |
| <b>Hazards and Hazardous Materials</b> | When applying herbicides to control invasive plant species, all chemicals will be handled in strict accordance with label specification.   | Project Developer | USFWS | During implementation   |

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| <b>Hazards and Hazardous Materials</b> | When applying herbicides to control invasive plant species, chemical treatments will be applied during calm, dry weather.  | Project Developer | USFWS              | During implementation              |
| <b>Hazards and Hazardous Materials</b> | When applying herbicides to control invasive plant species, an unsprayed buffer will be maintained near any sensitive areas.   | Project Developer | USFWS              | During implementation              |
| <b>Hazards and Hazardous Materials</b> | When applying herbicides to control invasive plant species, application equipment will be selected to provide site-specific delivery to target pests while minimizing/eliminating direct or indirect (e.g., drift) exposure to non-target areas. | Project Developer | USFWS              | Prior to and during implementation |
| <b>Hazards and Hazardous Materials</b> | To minimize and avoid the potential accidental release of hazardous materials, equipment must be stored, serviced, and fueled away from aquatic habitats and other sensitive areas.  | Project Developer | USFWS              | During implementation              |
| <b>Hazards and Hazardous Materials</b> | To minimize and avoid the potential accidental release of hazardous materials, appropriate materials must be available on site to clean up any small scale accidental hazardous spill.   | Project Developer | USFWS              | During implementation              |
| <b>Hazards and Hazardous Materials</b> | To minimize and avoid the potential accidental release of hazardous materials, all hazardous materials and petroleum products will be stored in  | Project Developer | County of Humboldt | During implementation              |

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|  | approved containers or chemical sheds.  |                   |       |                       |
| <b>Hazards and Hazardous Materials</b> | To minimize and avoid the potential accidental release of hazardous materials, all hazardous materials and petroleum products shall be located at least 100 feet from surface water in an area protected from runoff. | Project Developer | USFWS | During implementation |